# What a Load of Rubbish: a tideline survey

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## Introduction

Following from Quinn (2000), a tideline litter survey was undertaken to investigate changes in the amount of litter washed up on Aride's beach, over the recommended period of 30 days.

## Methods

The entire length of Aride's south beach was patrolled once a day at 07:00 for a standard search period of 45minutes between 10th September and 9th October, 2001. Any man made objects were collected and classified into the same groups as Quinn (2000), with additional categories for miscellaneous and bottle tops. In following with Quinn (2000) other island inhabitants were asked to refrain from beach litter collection during the study period.

## Results

Table 1 displays the total number of rubbish items in each category that were collected during the study period. As rubbish had been collected from Aride's beach daily, for the last 6 months, we included our first days results. There were an average of 16.5 items collected each day, comparable with the methodology of Quinn (2000). However, we also found 238 miscellaneous items, smaller than 10cm, which were excluded by Quinn (2000), bringing our average daily total to 24.5 items.

| | Shoes | Bottle Tops | Bottles | Boat | Food Related | Misc. |
|---|---|---|---|---|---|---|
| Total | 32 | 87 | 30 | 32 | 70 | 245 |
| % totals | 6.4 | 17.5 | 6.0 | 6.5 | 14.1 | 49.4 |
| Mean no. items/ day | 1.1 | 2.9 | 1.0 | 1.1 | 2.3 | 8.2 |

Table 1 –Total number of rubbish items in each category collected on Aride beach between September 10 and November 9, 2001.

## Discussion

Compared to the rubbish survey (Quinn, 2000) in which an average of 1.5 items were found per day, there seems to be a large increase in the amount of rubbish washing up on Aride's beach. The surveys were both undertaken during September and it is therefore unlikely that different weather conditions

attributed to this difference. Comparison of the weather for September 2000 and 20001 reveals that the study period was still in the south-east monsoon. However, September 2001 (Min = 26.3°C, Max = 33.2°C, Total rainfall = 18.8mm) was on average slightly hotter and a lot drier than September 2000 (Min = 24.7°C, Max = 29.2°C, Total rainfall = 151.1mm). This may indicate an earlier change to the north-west monsoon, when seas are calmer and less rubbish is likely to be washed up. Unfortunately Quinn (2000) does not state the search time that was employed in his study. The difference in items found per day may in part be ascribed to this and the differing weather conditions, however such a large increase is unlikely to be entirely due to these.

Of the categories used by Quinn (2000), the only one not to show an increase was shoes, which may be because Quinn's survey was primarily looking for shoes. A large increase in food related items was observed; these tended to be the polystyrene food containers used in take-aways on Praslin. Presumably this is a result of people consuming their meals on the beach and disposing of the containers there. More rubbish bins on or near to beaches may solve this problem.

A bottle-tops category was added as these seemed to make up a substantial part of the litter collected. These were mostly water bottle tops, which could be eliminated from rubbish if manufacturers employed a similar production to cans whereby the lid stays attached after opening.

## Conclusions

Ideally similar studies need to be undertaken in the middle of the monsoon periods rather than during the change of season, to allow for accurate comparison. It is also recommended that a daily or weekly tideline rubbish collection be undertaken by staff due to the large quantities of rubbish washed up on Aride's beach, which creates an unpleasant environment for both tourists and staff.

## References

Quinn, J. 2000. *Monitoring rubbish on Aride's beach: do left-footed flip-flops dominate in the flotsam and jetsam?* In: J. Bowler & J. Hunter 2000. *Aride Island Nature Reserve Seychelles: Annual Report 1999.* RSNC unpublished.